CLAIMS

1. An incubator comprising:

a substantially airtight heated chamber equipped with a door to access the heated chamber;

a culture plate with multiple wells placed in the heated chamber, the culture plate being adapted to contain an organism in at least one of the wells; and

means associated with the heated chamber and controlled from the exterior to remove the organism from a well and to put the organism in another well containing new culture medium.

2. The incubator according to claim 1, wherein the means controlled from the exterior is a pipette.

3. The incubator according to claim 1, further comprising a microscope associated with the heated chamber to observe the organism on a display screen placed exteriorly of the heated chamber.

4. The incubator according to claim 3, wherein the microscope has a stage located inside the heated chamber.

5. The incubator according to claim 3, wherein the microscope has a filter that protects the organism from deleterious effects of light.

6. The incubator according to claim 1, further comprising means controlled from the exterior of the heated chamber for stepwise displacement of the culture plate.

7. The incubator according to claim 6, wherein the means for stepwise displacement of the culture plate comprises either:

an endless conveyor belt driven by a roller rotated by a stepping motor controlled by a computer via a control line, or

an articulated manipulator arm controlled by a computer and capable of picking up the culture plate and moving the culture plate into an intervention zone, with the manipulator having a linear or rotary displacement.

8. The incubator according to claim 1, further comprising a source of culture medium communicating with a sluiced duct opening above a selected well in the culture plate and control means for the sluice to pour into the selected well a selected amount of culture medium.

9. The incubator according to claim 8, further comprising means for displacing the sluice from one well to another.

10. The incubator according to claim 1, further comprising sensors enabling autoregulation and monitoring of the atmosphere inside the heated chamber.

11. A method of incubating an organism:

placing the organism into a substantially airtight, heated chamber;

incubating the organism in a culture well containing culture medium; and

changing the culture medium n times, n being a whole number larger than 1 and smaller than 50, by:

i) placing the organism in one of a series of (n+1) wells of a culture plate placed in the heated chamber, while the n other wells of the series do not contain any organisms,

ii) displacing the organism, without removing it from the heated chamber, from the well and putting the organism into the next well of the series containing new culture medium and

iii) repeating the displacement as many times as there remain available wells.

12. The method according to claim 11, further comprising observing with a microscope color changes in the culture medium containing an indicator and contained in the well of a series of (n+1) colored wells in which the organism is contained and of changing the organism from one well to the next upon observing a color change.

13. The method according to claim 11, further comprising monitoring optical density in the heated chamber and changing wells when the optical density exceeds a specified threshold.